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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,402	06/25/2003	James N. Buttrick JR.	BING-1-1006	5644
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BLACK LOWE & GRAHAM, PLLC 701 FIFTH AVENUE SUITE 4800 SEATTLE, WA 98104				
			EXAMINER TALBOT, MICHAEL	
			ART UNIT 3722	PAPER NUMBER

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/606,402

Applicant(s)

BUTTRICK, JAMES N.

Examiner

Michael W. Talbot

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 8-26 is/are rejected.
- 7) ☒ Claim(s) 3-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 June 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 06/25/03, 04/01/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "earth magnets" recited in claim 5 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:

Throughout the entire Specification, character references "manufacturing assembly 100" and "workpiece surface 102" have been referenced without proper indexing to the appropriate figures. The numbers "100" and "102" should be removed entirely from the specification or the

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appropriate figures must be revised to properly index the character reference "manufacturing assembly 100" and "workpiece surface 102".

Refer to page 4, line 7, the character reference "workpiece 24" must be changed to read --workpiece 20--.

Refer to page 7, line 27, the character reference "clamp-up assembly 160" has been referenced without proper indexing to the appropriate figures. The number "160" should be removed entirely from the specification or the appropriate figures must be revised to properly index the character reference "clamp-up assembly 160".

Refer to page 8, line 1, the character reference "position sensor assembly 140" has been referenced without proper indexing to the appropriate figures. The number "140" should be removed entirely from the specification or the appropriate figures must be revised to properly index the character reference "position sensor assembly 140".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by York '814. York '814 shows in Figure 1 an apparatus (10) comprising a base member (22) with a first aperture (46), a drive platform (24) with a second aperture (48) being spaced apart from the base member by a separation distance, a plurality of guide members (18,20) extending between the drive platform and base member wherein at least one of the drive platform and the base member is moveable along guide members to changed the separation distance (col. 2, lines 26-

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31), at least one drive member (32) coupled between the drive platform and the base member, and a servo motor (36 and col. 2, lines 43-45) to move the drive member causing a varying separation distance. York '814 shows a tool assembly (34) coupled to the drive member (48,54).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over York '814 in view of Orrell et al. '897. York '814 lacks the specific details of the tool assembly, relative to the servomotor, the controller and the speed sensor. Orrell et al. '897 shows in Figure 8 a motor shaft (112), an armature winding (120) disposed about at least a portion of the motor shaft and a field assembly (earth magnets) positioned proximate the armature windings. Orrell et al. '897 further shows a controller (142) and a speed sensor (138) coupled to the servo motor and adapted to receive and transmit signals to the servo motor (col. 6, lines 10-42). In view of this teaching of Orrell et al. '897, it would have been obvious to one skilled in the art to substitute the servo motor of York '814 with the specific computer controlled servo motor of Orrell et al. '897 to achieve enhanced control over the drilling function.

With regards to claim 9, Examiner has taken "Official Notice" that it is well-known in the art to utilize a standard drill collet to secure a drill member. It would have been obvious to one skilled in the art to substitute the set screw (56) and socket (52) connection of York '814 in view of Orrell et al. '897 with standard collect well known in the art to achieve a more secure tool bit

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connection/fit and to reduce the likelihood of the set screw loosening and ultimately the drill bit disengaging during operation.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over York '814 in view of Orrell et al. '897, further in view of Kostrzewski '948. York '814 in view of Orrell et al. '897 lacks the motor shaft including a lubrication reservoir coupled at a first end and a lubrication channel extending internally therethrough. Kostrzewski '948 shows in Figure 1 a lubrication reservoir (22,24) at a first end and a hollow shaft (14) forming a lubrication channel. In view of this teaching of Kostrzewski '948, it would have been obvious to one skilled in the art to provide a motor shaft lubrication system of Kostrzewski '948 to the motor shaft of York '814 in view of Orrell et al. '897 to provide a means to transport debris away from the cutting tool end during operation and to provide cooling which ultimately prolongs the tool life.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over York '814 in view of Brown et al. '889. York '814 lacks the drive member being specifically a ball screw member. Brown et al. '889 shows in Figures 5 and 6 the fluid operated cylinders (124) responsible for adjusting the base member (128) relative to the drive platform(64) can be one of a ball screw mechanism (col. 7, lines 19-25). In view of this teaching of Brown et al. '889, it would have been obvious to one skilled in the art to substitute the feed screw drive mechanism (32) of York '814 with the ball screw mechanism of Brown et al. '889 to reduce the friction of the drive mechanism and ultimately extend the machines life span.

Claims 13-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over York '814 in view of Orrell et al. '897, further in view of Boyl-Davis et al. '328. York '814 in view of Orrell et al. '897 lacks the specific details of the track assembly. Boyl-Davis et al. '328 shows in Figures 1-5 a track assembly having a first (22) and a second (24) elongated flexible rail (col. 4, line 39 through col. 5, line 4) adapted to be attached to the workpiece via a plurality of vacuum cup

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assemblies (26) releasably affixed at spaced intervals along each rail and a carriage assembly (30) moveably coupled to the track assembly and the workpiece. In view of this teaching of *Boyl-Davis et al.* '328, it would have been obvious to one skilled in the art to mount the tool feed unit of *York* '814 in view of *Orrell et al.* '897 with the track assembly of *Boyl-Davis et al.* '328 to increase its versatility by more accurately positioning a drill machine on both simple and compound contoured-surfaces of various configurations with little effort by the user.

Allowable Subject Matter

5. Claims 3-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


6. Any inquiry concerning the content of this communication from the examiner should be directed to Michael W. Talbot, whose telephone number is 571-272-4481. The examiner's office hours are typically 8:30am until 5:00pm, Monday through Friday. The examiner's supervisor, Mr. Boyer D. Ashley, may be reached at 571-272-4502

In order to reduce pendency and avoid potential delays, group 3720 is encouraging FAXing of responses to Office Actions directly into the Group at FAX number 571-273-8300. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers, which require a fee, by applicants who authorize charges to a USPTO deposit account.

Please identify Examiner Michael W. Talbot of Art Unit 3722 at the top of your cover sheet.



Michael W. Talbot
Examiner
Art Unit 3722
15 August 2005



BOYER D. ASHLEY
PRIMARY EXAMINER